

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;

forming a mask comprising a resist over the semiconductor to overlap with a portion of the semiconductor; and

adding an impurity element to the semiconductor in accordance with the mask by a doping method; and

wherein an area of the mask is at most 15% of an area of the substrate.

~~wherein an area of the mask is smaller than that of a mask which has an opening only in an impurity element doped region and in an adjusting margin over the semiconductor.~~

2. (Original) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;

forming a mask comprising a resist over the semiconductor to overlap with a portion of the semiconductor; and

adding an impurity element to the semiconductor in accordance with the mask by a doping method with acceleration voltage of at least 80kV;

wherein an area of the mask is at most 15% of an area of the substrate.

3. (Currently Amended) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;
forming a mask comprising a resist over the semiconductor to overlap with a portion of the semiconductor and heating the resulted mask; and
adding an impurity element to the semiconductor in accordance with the mask by a doping method;

wherein an area of the mask is at most 35% of an area of the substrate.

~~wherein an area of the mask is smaller than that of a mask which has an opening only in an impurity element doped region and in an adjusting margin over the semiconductor.~~

4. (Original) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;
forming a mask comprising a resist over the semiconductor to overlap with a portion of the semiconductor and heating the resulted mask; and
adding an impurity element to the semiconductor in accordance with the mask by a doping method with acceleration voltage of at least 80kV;
wherein an area of the mask is at most 35% of an area of the substrate.

5. (Original) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;
forming a gate electrode over the semiconductor via an insulating film;
forming a first mask comprising a resist in a position to overlap with a portion of the semiconductor;
adding an n-type impurity element to the semiconductor in accordance with the mask by a doping method with acceleration voltage of at least 60kV;
removing the first mask;

forming a second mask comprising a resist in a position to overlap with a portion of the semiconductor; and

adding a p-type impurity element to the semiconductor in accordance with the mask by a doping method with acceleration voltage of at least 80kV;

wherein an area of the first mask is at most 20% of an area of the substrate, and an area of the second mask is at most 15% of an area of the substrate.

6. (Original) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;

forming a gate electrode over the semiconductor via an insulating film;

forming a first mask comprising a resist in a position to overlap with a portion of the semiconductor and heating the resulted first mask;

adding an n-type impurity element to the semiconductor in accordance with the mask by a doping method with acceleration voltage of at least 60kV;

removing the first mask;

forming a second mask comprising a resist in a position to overlap with a portion of the semiconductor and heating the resulted second mask; and

adding a p-type impurity element to the semiconductor in accordance with the mask by a doping method with acceleration voltage of at least 80kV;

wherein an area of the first mask is at most 40% of an area of the substrate, and an area of the second mask is at most 35% of an area of the substrate.

7. (Original) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;

forming a gate electrode over the semiconductor via an insulating film;

forming a first mask comprising a resist in a position to overlap with a portion of the semiconductor;

adding an n-type impurity element to the semiconductor in accordance with the mask by a doping method with current density of at least $15\mu\text{A}/\text{cm}^2$ and with acceleration voltage of at least 60kV;

removing the first mask;

forming a second mask comprising a resist in a position to overlap with a portion of the semiconductor; and

adding a p-type impurity element to the semiconductor in accordance with the mask by a doping method with current density of at least $15\mu\text{A}/\text{cm}^2$ and with acceleration voltage of at least 80kV;

wherein an area of the first mask is at most 20% of an area of the substrate, and an area of the second mask is at most 15% of an area of the substrate.

8. (Original) A method for manufacturing a semiconductor apparatus comprising the steps of:

forming a semiconductor over a substrate;

forming a gate electrode over the semiconductor via an insulating film;

forming a first mask comprising a resist in a position to overlap with a portion of the semiconductor and heating the resulted first mask;

adding an n-type impurity element to the semiconductor in accordance with the mask by a doping method with current density of at least $15\mu\text{A}/\text{cm}^2$ and with acceleration voltage of at least 60kV;

removing the first mask;

forming a second mask comprising a resist in a position to overlap with a portion of the semiconductor and heating the resulted second mask; and

adding a p-type impurity element to the semiconductor in accordance with the mask by a doping method with current density of at least $15\mu\text{A}/\text{cm}^2$ and with acceleration voltage of at least 80kV;

wherein an area of the first mask is at most 40% of an area of the substrate, and an area of the second mask is at most 35% of an area of the substrate.

9-11. (Canceled)

12. (Original) A method for manufacturing a semiconductor apparatus according to claim 1, wherein the semiconductor apparatus is a display device.

13. (Original) A method for manufacturing a semiconductor apparatus according to claim 2, wherein the semiconductor apparatus is a display device.

14. (Original) A method for manufacturing a semiconductor apparatus according to claim 3, wherein the semiconductor apparatus is a display device.

15. (Original) A method for manufacturing a semiconductor apparatus according to claim 4, wherein the semiconductor apparatus is a display device.

16. (Original) A method for manufacturing a semiconductor apparatus according to claim 5, wherein the semiconductor apparatus is a display device.

17. (Original) A method for manufacturing a semiconductor apparatus according to claim 6, wherein the semiconductor apparatus is a display device.

18. (Original) A method for manufacturing a semiconductor apparatus according to claim 7, wherein the semiconductor apparatus is a display device.

19. (Original) A method for manufacturing a semiconductor apparatus according to claim 8, wherein the semiconductor apparatus is a display device.

20. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 12, wherein an area of the substrate is no less than 1 square meter.

21. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 13, wherein an area of the substrate is no less than 1 square meter.

22. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 14, wherein an area of the substrate is no less than 1 square meter.

23. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 15, wherein an area of the substrate is no less than 1 square meter.

24. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 16, wherein an area of the substrate is no less than 1 square meter.

25. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 17, wherein an area of the substrate is no less than 1 square meter.

26. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 18, wherein an area of the substrate is no less than 1 square meter.

27. (Previously Presented) A method for manufacturing a semiconductor apparatus according to claim 19, wherein an area of the substrate is no less than 1 square meter.